Environmental Assessment Checklist

Project Name: Bear Springs Timber Sale
Proposed Implementation Date: June 2018
Proponent: Kalispell Unit, Northwest Land Office, Montana DNRC
County: Flathead

Type and Purpose of Action

Description of Proposed Action:

The Kalispell Unit of the Montana Department of Natural Resources and Conservation (DNRC) is proposing the Bear Springs Timber Sale. The project is located approximately 8 miles west of Marion, MT (refer to Attachments vicinity map A-**1** and project map A-**2**) and includes the following sections:

Beneficiary	Legal Description	Total Acres	Treated Acres
Common Schools	**Section 16, T27N, R25W**	**640**	**566**

Objectives of the project include:

1) Implement silvicultural treatments to improve forest health and vigor.
2) Sell forest products from trust lands within the project area to generate revenue for various trusts to produce the largest measure of reasonable and legitimate return over the long run for specific beneficiary institutions (*Section 77-1-202, Montana Codes Annotated (MCA)).*
3) Improve existing access to the project area.

Proposed activities include:

Action	Quantity
Proposed Harvest Activities	# Acres
Clearcut	
Seed Tree	
Shelterwood	
Selection	
Commercial Thinning	566
Salvage	
Overstory Removal	
Total Treatment Acres	**566**
Proposed Forest Improvement Treatment	# Acres
Pre-commercial Thinning	
Planting	

Action	Quantity
Proposed Road Activities	# Miles
New permanent road construction	
New temporary road construction	0.10
Road maintenance	5.37
Road reconstruction	3.7
Road abandoned	
Road reclaimed	
Other Activities	
Mechanical site prep	566
Pile burning	566

Duration of Activities:	Approx. 30 months
Implementation Period:	August 2018

The lands involved in this proposed project are held in trust by the State of Montana. (Enabling Act of February 22, 1889; 1972 Montana Constitution, Article X, Section 11). The Board of Land Commissioners and the DNRC are required by law to administer these trust lands to produce the largest measure of reasonable and legitimate return over the long run for the beneficiary institutions (Section 77-1-202, MCA).

The DNRC would manage lands involved in this project in accordance with:

- The State Forest Land Management Plan (DNRC 1996),
- Administrative Rules for Forest Management (ARM 36.11.401 through 471),
- and all other applicable state and federal laws.

Project Development

SCOPING:

- DATE:
  - December 26, 2017
- PUBLIC SCOPED:
  - The scoping notice was posted on the DNRC Website: http://dnrc.mt.gov/public-interest/public-notices
  - Letters and e-mails were sent to those parties and individuals listed on the DNRC scoping list as well as adjacent landowners, local MT FWP biologists, and DNRC staff.
- AGENCIES SCOPED:
  - Montana Fish, Wildlife, and Parks, Tribal Nations
- COMMENTS RECEIVED:
  - How many: 2 e-mail comments (2 internal from DNRC staff). DNRC received one letter from the Northern Cheyenne Tribal Historic Preservation Office and another from the Confederated Salish and Kootenai Tribal Historic Preservation Office.
  - Concerns: disturbance of cultural resources.
  - Results (how were concerns addressed): DNRC archeologist, Patrick Rennie, conducted a field survey of the project area. No cultural resources were found. If

an unanticipated cultural resource is discovered, all project related activities will cease until the resource can be adequately evaluated. The DNRC will keep interested parties apprised of any unanticipated discoveries.
- DNRC specialists were consulted, including: Marc Vessar, DNRC hydrologist; Chris Forristal, DNRC wildlife biologist, Patrick Rennie, DNRC archeologist.

Internal and external issues and concerns were incorporated into project planning and design and will be implemented in associated contracts.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

- **Montana Department of Environmental Quality (DEQ)-** DNRC is classified as a major open burner by DEQ and is issued a permit from DEQ to conduct burning activities on state lands managed by DNRC. As a major open-burning permit holder, DNRC agrees to comply with the limitations and conditions of the permit.

  A Short-term Exemption from Montana's Surface Water Quality Standards (318 Authorization) may also be required from DEQ if activities such as replacing a bridge on a stream would introduce sediment above natural levels into streams.

- **Montana/Idaho Airshed Group-** The DNRC is a member of the Montana/Idaho Airshed Group which was formed to minimize or prevent smoke impacts while using fire to accomplish land management objectives and/or fuel hazard reduction (Montana/Idaho Airshed Group 2006). The Group determines the delineation of airsheds and impact zones throughout Idaho and Montana. Airsheds describe those geographical areas that have similar atmospheric conditions, while impact zones describe any area in Montana or Idaho that the Group deems smoke sensitive and/or having an existing air quality problem (Montana/Idaho Airshed Group 2006). As a member of the Airshed Group, DNRC agrees to burn only on days approved for good smoke dispersion as determined by the Smoke Management Unit.

- **Montana Department of Fish, Wildlife and Parks (DFWP)-** A Stream Protection Act Permit (124 Permit) is required from DFWP for activities that may affect the natural shape and form of a stream's channel, banks, or tributaries. Such activities include:
  - N/A

ALTERNATIVES CONSIDERED:

No-Action Alternative: Timber harvest would not occur and no revenue would be generated for the Common School Trust. The road system would not be upgraded to meet Best Management Practices (BMP's).

Action Alternative: Approximately 2.0 million board feet of timber would be harvested from 566 acres and would generate income for the Common School Trust. Access to the project area would be improved by upgrading roads to meet BMP's. Forest health and vigor of the residual forest would be improved.

Impacts on the Physical Environment

Evaluation of the impacts on the No-Action and Action Alternatives including **direct, secondary, and cumulative** impacts on the Physical Environment.

VEGETATION:

Vegetation Existing Conditions: No rare or endangered plants are present within the project area. No old growth is present within the project area. The project area has experienced numerous timber harvests in the past 80 years. Numerous age classes and stocking levels are present. The northern portion of the project area experienced regeneration harvests (clear cut and seed tree prescriptions). Abundant regeneration is present throughout these areas. The remainder of the area is a fully stocked sawtimber stand that will be commercially thinned.

Vegetation	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Noxious Weeds		X				X				X			yes	
Rare Plants	X				X				X				n/a	
Vegetative community	X				X				X				n/a	
Old Growth	X				X				X				n/a	
Action														
Noxious Weeds			X			X				X			yes	1
Rare Plants	X				X				X				n/a	
Vegetative community		X				X				X			yes	1
Old Growth	X				X				X				n/a	

Comments: 1. Timber harvest and associated road work may lead to an increase in the occurrence of noxious weeds.

Vegetation Mitigations: DNRC plans to complete herbicide treatments of noxious weeds on the state parcel and segments of the access roads on adjacent ownerships to control existing weed infestations. All equipment would be washed and inspected prior to start of work. All new roads would be reseeded to site adapted grass to reduce the threat of noxious weed spread. Project areas would be monitored for noxious weeds after harvest operations are complete and herbicide treatments may be applied if needed.

SOIL DISTURBANCE AND PRODUCTIVITY:

Soil Disturbance and Productivity Existing Conditions: The parcel includes six different soil map units with slopes ranging from nearly flat to approximately 50 percent. Erosion hazard in the proposed harvest units is moderate in most of the parcel, however some high erosion potential soils are present. The higher erosion risk areas generally have less rock content which

makes the fine soil particles less resistant to downslope movement. During field reconnaissance, no evidence of substantial soil movement was observed even though the parcel has been entered for various uses over the last 70+ years.

Section record cards at the Kalispell Unit indicate commercial harvest activity on the parcel beginning in the late 1940's when over 6MMBF was removed. Since that time, several small harvests have taken place for firewood and sawlogs. Other product removals include individual and commercial Christmas tree harvest and personal firewood collection.

Skid trails and roads are present throughout the parcel as a result of past management activities. While most of the roads do not meet current Best Management Practice (primarily due to surface drainage deficiencies), no evidence of mass wasting or erosion into water bodies was observed. Skid trails are generally well-vegetated with grasses, forbs and shrubs.

Soil Disturbance and Productivity	**Impact**												**Can Impact Be Mitigated?**	**Comment Number**
	Direct				**Secondary**				**Cumulative**					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Physical Disturbance (Compaction and Displacement)	**X**				**X**						**X**			**S-1**
Erosion	**X**				**X**					**X**				**S-1**
Nutrient Cycling	**X**				**X**					**X**				**S-2**
Slope Stability	**X**				**X**					**X**				**S-3**
Soil Productivity	**X**				**X**					**X**				**S-2**
Action														
Physical Disturbance (Compaction and Displacement)			**X**				**X**				**X**		**Y**	**S-1**
Erosion		**X**				**X**				**X**			**Y**	**S-1**
Nutrient Cycling		**X**				**X**				**X**			**Y**	**S-2**
Slope Stability		**X**				**X**				**X**			**Y**	**S-3**
Soil Productivity		**X**				**X**				**X**			**Y**	**S-2**

Comments:
S-1: Compaction, displacement and erosion within the parcel is considered moderate due to the estimated 10-15 percent cumulative areal coverage. Although, some of the soils within the parcel are higher risk of erosion, the implementation of BMPs coupled with a partial harvest would be expected to maintain the majority of the soil-stabilizing vegetation.

S-2: Nutrient cycling and soil productivity would be maintained by leaving fine and coarse woody debris for nutrient cycling to provide continued soil productivity.

S-3: Roads are located in areas that have a low risk of destabilizing. Forestry BMPs would be implemented during reconstruction and maintenance activities to minimize the risk of destabilizing cutslopes.

Soil Mitigations:

1) Limit equipment operations to periods when soils are relatively dry, (less than 20 percent oven-dried weight), frozen, or snow-covered in order to minimize soil compaction and rutting, and maintain drainage features. Check soil moisture conditions prior to equipment start-up.

2) On ground-based units, especially on previously harvested areas, the logger and sale administrator would agree to a skidding plan prior to equipment operations. Skid-trail planning would identify which main trails to use and how many additional trails are needed. Trails that do not comply with BMPs (i.e. trails in draw bottoms) would not be used unless impacts can be adequately mitigated. Regardless of use, these trails may be closed with additional drainage installed, where needed, or grass-seeded to stabilize the site and control erosion.

3) Tractor skidding should be limited to slopes of less than 40 percent unless the operation can be completed without causing excessive displacement or erosion. Based on site review, short, steep slopes in Unit 2 may require a combination of mitigation measures, such as adverse skidding to a ridge or winchline, and skidding from more moderate slopes of less than 40 percent.

4) Keep skid trails to 20 percent or less of the harvest unit acreage. Provide for drainage in skid trails and roads concurrently with operations.

5) Slash disposal: No dozer piling on slopes over 35 percent; no excavator piling on slopes over 40 percent, unless the operation can be completed without causing excessive erosion. Consider lopping and scattering or jackpot burning on the steeper slopes.

6) Retain 12 to 24 tons of large woody debris and a feasible majority of all fine litter following harvesting operations. On units where whole tree harvesting is used, consider implementing one of the following mitigations to minimize fine litter removal 1) use in-woods processing equipment that leaves slash on site; 2) for whole-tree harvesting, return-skid slash and evenly distribute within the harvest area; or 3) cut tops from every third bundle of logs so that tops are dispersed as skidding progresses.

WATER QUALITY AND QUANTITY:

The only surface water identified in the parcel is a short, Class 2 spring that does not connect to downstream water bodies. Because the proposed prescription is a commercial thin/sanitation harvest and no surface water provides fisheries habitat or connection to fisheries habitat, the risk of adverse effects to water quality would be low. Additionally, the limited harvest would not likely result in measurable water quantity increases.

Water Quality and Quantity Existing Conditions: The entire parcel is included in the Upper Pleasant Valley Fisher River 6th-code HUC watershed (17010102101). This watershed is approximately 23,935 acres and has an average precipitation of 21 inches per year.

Within the parcel, the only surface water is a perennial spring that flows for less than 300 feet before percolating into the ground. Therefore, there is no surface water connection from the parcel to other bodies of water.

Water Quality & Quantity	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Water Quality	**X**				**X**					**X**				
Water Quantity	**X**				**X**					**X**				
Action														
Water Quality		**X**				**X**				**X**			**Y**	**H-1**
Water Quantity		**X**				**X**				**X**			**N**	

Comments:
H-1: Due to the lack of connection to downstream water, the risk of negatively impacting water quality in watershed is limited. However, DNRC would require the implementation of Forestry BMPs and adhere to the SMZ law to minimize the risk of water quality impacts to all surface water features.

Water Quality & Quantity Mitigations: Implement all applicable Forestry BMPs.

FISHERIES:

Fisheries Existing Conditions: The Bear Springs parcel has no fish-bearing streams or surface water that connects to downstream waterbodies. The proposed haul route would cross Bear Springs Creek approximately three-quarters mile north of the state section. Information from Montana Fish, Wildlife and Parks website indicates that westslope cutthroat trout are found in the stream.

No-Action: No direct or indirect impacts would occur to affected fish species or affected fisheries resources beyond those described in Fisheries Existing Conditions. Cumulative effects (other related past and present factors; other future, related actions; and any impacts described in Fisheries Existing Conditions) would continue to occur.

Action Alternative (see Fisheries table below):

Fisheries	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Sediment	**X**				**X**					**X**				
Connectivity	**X**				**X**					**X**				
Populations	**X**				**X**						**X**			
Action														
Sediment		**X**				**X**				**X**			**Y**	**F-1**

Fisheries	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Connectivity		**X**				**X**				**X**			**N**	**F-2**
Populations	**X**				**X**						**X**		**N**	**F-2**

Comments:
F-1: DNRC would implement Forestry BMPs to minimize the risk of sediment delivery to the stream.

F-2: According to the FWP website, the westslope cutthroat trout may be hybridized with rainbow trout. The indicates that connectivity is likely available at some or all flows.

Fisheries Mitigations: Follow all applicable Forestry BMPs.

WILDLIFE:

Wildlife Existing Conditions: The project area contains of variety of habitat conditions for native wildlife species. The project area consists of a single 640-acre parcel (T27N, R25W, section 16). This parcel is surrounded by private industrial timberland and other private property. Approximately 4.5 miles of existing roads occur within the project area, of which 2.1 miles are open to public motorized use and 2.4 miles are restricted. However, due to unauthorized breach of a road barrier, all 2.4 miles of restricted road are receiving occasional motorized use. Extensive firewood harvesting is occurring along most of these roads. The project area contains 491 acres of mature forest stands (trees ≥8" dbh with ≥40% canopy closure). Insect and disease outbreaks are resulting in tree mortality within small, scattered patches throughout the project area. The southern 1/3 of the project area consists of 129 acres with large trees and a more open (<40%) canopy on drier, south-facing slopes. Approximately 19 acres is comprised of small patches of non-forested openings. Overall, habitat conditions within the project area are more favorable for wildlife species preferring well-developed forest with a relatively closed canopy and, to a lesser extent, species utilizing more open stands containing large trees.

No-Action Alternative: None of the proposed activities would occur. In the short-term, no changes to the amounts, quality, or spatial arrangement of forested habitat would occur. In the long-term, habitat suitability for mature forest-associated species could decrease due to forest insects and disease currently impacting existing large trees and reducing live canopy in some of these stands. Overall, in the absence of other natural disturbance, current wildlife habitat conditions would be expected to persist under the No-Action Alternative.

Action Alternative (see Wildlife table below):

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Threatened and Endangered Species														
Grizzly bear	**X**				**X**				**X**					**WI-1**

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
(Ursus arctos) Habitat: Recovery areas, security from human activity														
Canada lynx (*Felix lynx)* Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zone	**X**				**X**				**X**					**WI-2**
Sensitive Species														
Bald eagle *(Haliaeetus leucocephalus)* Habitat: Late-successional forest within 1 mile of open water		**X**				**X**				**X**				**WI-3**
Black-backed woodpecker *(Picoides arcticus)* Habitat: Mature to old burned or beetle-infested forest	**X**				**X**				**X**					**WI-2**
Coeur d'Alene salamander *(Plethodon idahoensis)* Habitat: Waterfall spray zones, talus near cascading streams	**X**				**X**				**X**					**WI-2**
Columbian sharp-tailed grouse *(Tympanuchus Phasianellus columbianus)* Habitat: Grassland, shrubland, riparian, agriculture	**X**				**X**				**X**					**WI-2**
Common loon *(Gavia immer)* Habitat: Cold mountain lakes, nest in emergent vegetation	**X**				**X**				**X**					**WI-2**
Fisher *(Martes pennanti)*		**X**				**X**				**X**			**Y**	**WI-4**

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Habitat: Dense mature to old forest less than 6,000 feet in elevation and riparian														
Flammulated owl *(Otus flammeolus)* Habitat: Late-successional ponderosa pine and Douglas-fir forest		**X**				**X**				**X**			**Y**	**WI-5**
Gray Wolf *(Canis lupus)* Habitat: Ample big game populations, security from human activities		**X**				**X**				**X**				**WI-6**
Harlequin duck *(Histrionicus histrionicus)* Habitat: White-water streams, boulder and cobble substrates	**X**					**X**			**X**					**WI-2**
Northern bog lemming *(Synaptomys borealis)* Habitat: Sphagnum meadows, bogs, fens with thick moss mats	**X**				**X**				**X**					**WI-2**
Peregrine falcon *(Falco peregrinus)* Habitat: Cliff features near open foraging areas and/or wetlands	**X**				**X**				**X**					**WI-2**
Pileated woodpecker *(Dryocopus pileatus)* Habitat: Late-successional ponderosa pine and larch-fir forest			**X**				**X**				**X**		**Y**	**WI-7**
Townsend's big-eared bat *(Plecotus townsendii)*	**X**				**X**				**X**					**WI-2**

Wildlife	Impact												Can Impact be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Habitat: Caves, caverns, old mines														
Wolverine *(Gulo gulo)* Habitat: Alpine tundra and high-elevation boreal forests that maintain deep persistent snow into late spring	**X**				**X**				**X**					**WI-2**
Big Game Species														
Elk		**X**				**X**				**X**			**Y**	**WI-8**
Whitetail		**X**				**X**				**X**			**Y**	**WI-8**
Mule Deer		**X**				**X**				**X**			**Y**	**WI-8**
Other														
Mature forest			**X**				**X**				**X**			**WI-9**
Northern goshawk			**X**				**X**				**X**		**Y**	**WI-10**

Comments:

WI-1. Grizzly Bear – The project area is not in a recovery zone and is 4.6 miles from non-recovery occupied habitat (Wittinger 2002). While occasional presence of a grizzly bear in the parcel is possible, appreciable use by grizzly bears would not be expected due to the absence of preferred habitat and distance from occupied grizzly bear habitat. As bears continue to expand their range westward, bears could occasionally travel through the parcel during their long-range movements.

WI-2. This species was evaluated and it was determined that the project area lies outside of the normal distribution for the species, and/or suitable habitat was not found to be present.

WI-3. Bald Eagle – A portion of the project area falls within the territory of the Lost Prairie bald eagle pair; however the nest site is over 2 miles from any proposed harvest unit. Homes and open roads are situated between the nest site area and the DNRC parcel. A well-traveled open road runs within 525 feet of the active nest. Appreciable use of the project area by bald eagles would not be expected due to the lack of preferred habitat (e.g. lakes, meadows). Additionally, the number of home sites and open roads in close proximity to the eagle nest site would indicate that these eagles are likely habituated to human disturbance and would not be appreciably affected by the proposed activities.

WI-4. Fisher – Approximately 500 acres of potential fisher habitat would be affected by the proposed activities (99% of fisher habitat available in the Project Area). Habitat suitability of all of these acres would be reduced post-harvest due to lower amounts of mature conifer cover. Overstory canopy closure would decrease to 25-40%, although some scattered portions of stands would have over 40% canopy closure when including smaller, regenerating conifers. To reduce potential adverse effects on fishers, at least 2 large snags and 2 large snag recruitment trees per acre (>21 inches dbh) would be retained (*ARM 36.11.411*). These snags are important habitat features that provide resting and denning sites for fishers. Riparian fisher habitat would not be harvested. Considering the low availability of mature stands in the surrounding area, lack of fisher observations within the last 30 years (MNHP 2018), and prevalence of dry ponderosa

pine forest types, which are avoided by fishers (*Olson et al. 2014*), the likelihood of fishers using the cumulative effects analysis area (CEAA) area is low.

WI-5. Flammulated Owls – The proposed timber harvest would affect approximately 260 acres (77.8% of habitat in the Project Area) of preferred flammulated owl cover types. Over half of these acres are currently too densely forested to be considered suitable for flammulated owl use. The proposed thinning treatments would reduce tree density within the stand and would favor seral species, which would create more open forest stand conditions potentially beneficial to flammulated owls. To retain potential nesting trees for flammulated owls at least 2 large snags and 2 large snag recruitment trees per acre (>21 inches dbh) would be retained (*ARM 36.11.411*). Additionally, motorized use of existing roads would be restricted by berms and gates; thus reducing the risk of snags being cut for firewood. Within the CEAA, a number of forest stands appear to be suitable cover types for flammulated owls, however snags available for nesting and live trees for foraging are likely limited due to intensive forest management and widespread firewood gathering on surrounding ownerships.

WI-6. Gray Wolf – Wolves likely use habitat within the Project Area. Disturbance associated with timber sales at den and rendezvous locations can adversely affect wolves; however, timing restrictions would apply if den or rendezvous sites are documented (*ARM 33.11.430(1)(a)(b)*). Potential impacts of the Action Alternative to big game species would not likely alter prey availability for wolves at the territory scale.

WI-7. Pileated Woodpecker – The proposed activities would affect 477 acres of suitable pileated woodpecker habitat (87.0% of habitat available in the Project Area). All of these acres would be thinned with harvest prescriptions that decrease mature canopy cover from 45-80% to 25-40% and cause a reduction in habitat suitability for pileated woodpecker use post-harvest. Treated stands would remain suitable for pileated woodpeckers post-harvest, although fewer snags would be available for nesting and foraging. To reduce potential adverse effects on pileated woodpeckers, at least 2 large snags and 2 large snag recruitment trees per acre (>21 inches dbh) would be retained and all snags cut for safety reasons would be left in the harvest unit (*ARM 36.11.411*). Down woody debris amounts of 12 to 24 tons/ac would be retained and provide some foraging opportunities for pileated woodpeckers. Additionally, motorized use on existing roads would be restricted by berms and gates; thus reducing the risk of snags being cut for firewood. Habitat alterations due to the proposed action would be additive to habitat changes within the CEAA due to forest management on private lands and habitat availability outside of the project area would remain poor.

WI-8. Big Game – Although DFWP does not consider the project area to be winter range for white-tailed deer and elk (*DFWP 2008*), frequent winter use by these species was observed at lower elevations. The proposed activities would reduce thermal cover on potential white-tailed deer and elk winter range. The proposed harvest would affect 489 acres of thermal cover (99.5% of thermal cover available in the Project Area). Harvest prescriptions would reduce live tree densities to an average of 38 mature trees (≥8” dbh) per an acre and canopy cover to 25-40%, thus reducing the capacity of these stands to provide thermal cover and snow intercept during typical winter conditions. Scattered patches of thermal cover would remain post-harvest, albeit at a reduced quality. Treated stands should exhibit better health and growth that would result in improved thermal cover over time. Approximately 74 acres of more open forest with mature trees on drier, south-facing slopes would remain unaltered and provide some thermal cover. Hiding cover would be reduced but still sufficient to offer big game relatively quick escape and refugia. No new open roads would be built and motorized restrictions on all existing roads would be implemented, which would increase security for big game compared to current conditions.

WI-9. Mature Forest/Old-growth Forest – The proposed action would harvest approximately 489 acres of mature forest (99.5% of mature forest within the project area) with a reasonably closed canopy (≥40% canopy closure). Harvest prescriptions on all 489 acres would reduce live tree densities to an average of 38 mature trees (≥8" dbh) per an acre and canopy cover to 25-40%. The majority of these stands would no longer be suitable for wildlife species preferring dense forest with more shaded canopies. Forest species with less specific habitat requirements for tree density and crown closure would continue to persist in treated areas. At the same time, habitat suitability for species utilizing more open forest with scattered mature trees would increase. Increased growth and vigor of remaining trees in the project area could restore mature forest conditions in the long term. Intensive forest management on adjacent private lands has removed most mature forest within the CEAA and would likely continue to be removed as stands grow back to merchantable size. Thus, mature forest would remain poorly-represented and unconnected within the CEAA.

WI-10. Northern Goshawk – An active goshawk nest was found within the project area during fieldwork in 2018. Should the territory remain active, harvesting activities associated with the Action Alternative would be prohibited within ¼ mile of the nest site from April 1 – August 15th to minimize disturbance to nesting goshawks. Additionally, a 100-foot no-cut buffer would be implemented around the nest site to avoid damage of the nest tree and retain habitat features in the immediate vicinity of the nest. However, proposed harvesting would alter approximately 489 acres of mature stands around the nest site. Harvest prescriptions would thin stand density and retain larger, seral species averaging 38 trees per acre. Post-harvest overstory crown closure and basal area would likely be too low for continued nesting by goshawks, although stands would remain suitable for foraging. Mature forest habitat in the vicinity of the nest could be altered to a degree that goshawks could consider this particular nest site unsuitable for nesting post-harvest. Goshawks typically use 2-5 alternate nest sites within a large territory that likely extends outside of the project area; goshawks may find other nest sites still suitable for use and thus continue to occupy the territory.

Wildlife Mitigations:

- If a threatened or endangered species is encountered, consult a DNRC biologist immediately. Similarly, if undocumented nesting raptors or wolf dens are encountered within ½ mile of the Project Area, contact a DNRC biologist.
- Contractors will adhere to food storage and sanitation requirements as described in the timber sale contract. Ensure that all attractants such as food, garbage, and petroleum products are stored in a bear-resistant manner.
- Prohibit contractors and purchasers conducting contract operations from carrying firearms while on duty as per *ARM 36.11.444(2)*.
- Prohibit all motorized activities within ¼ mile of active goshawk nests from April 1 – August 15th.
- Effectively close roads in the Project Area via a combination of gates, kelly humps, rocks, and stumps.
- Retain patches of advanced regeneration conifers where available and practicable.
- Retain at least 2 snags and 2 snag recruits per acre >21 inches dbh or the next available size class, particularly favoring ponderosa pine, western larch and Douglas-fir for retention. If snags are cut for safety concerns, they must be left in the harvest unit.
- Retain 12-24 tons/acre of coarse-woody debris and emphasize retention of 15-inch diameter downed logs, aiming for at least one 20-foot-long section per acre.

Literature:

DFWP. 2008. Maps of moose, elk, mule deer, and white-tailed deer distribution in Montana. *In* Individual GIS data layers. Available online at:
http://fwp.mt.gov/gisData/imageFiles/distributionElk.jpg
http://fwp.mt.gov/gisData/imageFiles/distributionMoose.jpg
http://fwp.mt.gov/gisData/imageFiles/distributionMuleDeer.jpg
http://fwp.mt.gov/gisData/imageFiles/distributionWhiteTailedDeer.jpg

MNHP. 2018. Natural Heritage Map Viewer. Montana Natural Heritage Program. Retrieved on June 19, 2018, from http://mtnhp.org/MapViewer.

Olson, L. E., J. D. Sauder, N. M. Albrecht, R. S. Vinkey, S. A. Cushman, and M. K. Schwartz. 2014. Modeling the effects of dispersal and patch size on predicted fisher (*Pekania [Martes] pennanti*) distribution in the U.S. Rocky Mountains. Biological Conservation 169:89-98.

USFWS, and DNRC. 2010. Montana Department of Natural Resources and Conservation Forested Trust Lands Habitat Conservation Plan, Final Environmental Impact Statement, Volumes I and II., U.S. Department of Interior, Fish and Wildlife Service, Region 6, Denver, Colorado and Montana Department of Natural Resources and Conservation, Missoula, MT.

Wittinger, W. 2002. Grizzly bear distribution outside of recovery zones. Unpublished memorandum. Report on file at USDA Forest Service, Region 1, Missoula, MT.

AIR QUALITY:

Air Quality	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Smoke	**X**				**X**				**X**				**n/a**	
Dust	**X**				**X**				**X**				**n/a**	
Action														
Smoke		**X**				**X**				**X**			**Yes**	**1**
Dust		**X**				**X**				**X**			**Yes**	**1**

Comments: 1. Smoke will be created from pile burning and dust may be created from log hauling operations.

Air Quality Mitigations: Burning would occur on days approved by the Montana/Idaho Airshed group and DEQ. Conduct test burn to verify good dispersal. Dust abatement may be used as necessary. Slower speed limits may be included in contracts as necessary to reduce dust. Winter harvest is probable due to project's low elevation and close proximity to County Road access.

ARCHAEOLOGICAL SITES / AESTHETICS / DEMANDS ON ENVIRONMENTAL RESOURCES:

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Historical or Archaeological Sites	**X**				**X**				**X**				**n/a**	
Aesthetics	**X**				**X**				**X**				**n/a**	
Demands on Environmental Resources of Land, Water, or Energy	**X**				**X**				**X**				**n/a**	
Action														
Historical or Archaeological Sites		**X**			**X**					**X**			**yes**	**1**
Aesthetics		**X**			**X**					**X**			**yes**	**1**
Demands on Environmental Resources of Land, Water, or Energy	**X**				**X**					**X**			**n/a**	

Comments: Timber harvest activity and associated road work could disturb archaeological resources.

Mitigations: All THPO offices throughout the state have been notified of this project. Currently, the DNRC has no record of cultural resources in the area of potential effect, and other THPOs have not identified tribal cultural resources there. In May of 2018, Patrick Rennie (DNRC staff archeologist) conducted a cultural and paleontological survey of the project area. During the course of examination, a rock cairn of recent construction was identified. No other resources were discovered. No state-owned Heritage Property will be affected by the proposed timber harvest. If an unanticipated cultural resource is discovered, all project related activities will cease until the resource can be adequately evaluated.

OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:

- N/A

Impacts on the Human Population

Evaluation of the impacts on the proposed action including **direct, secondary, and cumulative** impacts on the Human Population.

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
No-Action														
Health and Human Safety	**X**				**X**				**X**				**n/a**	
Industrial, Commercial and Agricultural Activities and Production	**X**				**X**				**X**				**n/a**	
Quantity and Distribution of Employment	**X**				**X**				**X**				**n/a**	
Local Tax Base and Tax Revenues	**X**				**X**				**X**				**n/a**	
Demand for Government Services	**X**				**X**				**X**				**n/a**	
Access To and Quality of Recreational and Wilderness Activities	**X**				**X**				**X**				**n/a**	
Density and Distribution of population and housing	**X**				**X**				**X**				**n/a**	
Social Structures and Mores	**X**				**X**				**X**				**n/a**	
Cultural Uniqueness and Diversity	**X**				**X**				**X**				**n/a**	
Action														
Health and Human Safety														
Industrial, Commercial and Agricultural Activities and Production	**X**				**X**				**X**				**n/a**	
Quantity and Distribution of Employment	**X**				**X**				**X**				**n/a**	
Local Tax Base and Tax Revenues	**X**				**X**				**X**				**n/a**	
Demand for Government Services	**X**				**X**				**X**				**n/a**	
Access To and Quality of Recreational and Wilderness Activities	**X**				**X**				**X**				**n/a**	
Density and Distribution of population and housing	**X**				**X**				**X**				**n/a**	
Social Structures and Mores	**X**				**X**				**X**				**n/a**	

Will Alternative result in potential impacts to:	Impact												Can Impact Be Mitigated?	Comment Number
	Direct				Secondary				Cumulative					
	No	Low	Mod	High	No	Low	Mod	High	No	Low	Mod	High		
Cultural Uniqueness and Diversity	**X**				**X**				**X**				**n/a**	

Comments: The proposed action will have no direct, indirect, or cumulative impacts.

Mitigations: n/a

Locally Adopted Environmental Plans and Goals:

- N/A

Other Appropriate Social and Economic Circumstances:

Costs, revenues and estimates of return are estimates intended for relative comparison of alternatives. They are not intended to be used as absolute estimates of return. The estimated stumpage is based on comparable sales analysis. This method compares recent sales to find a market value for stumpage. These sales have similar species, quality, average diameter, product mix, terrain, date of sale, distance from mills, road building and logging systems, terms of sale, or anything that could affect a buyer's willingness to pay.

No Action: The No Action alternative would not generate any return to the trust at this time.

Action: The timber harvest would generate additional revenue for the Common School Trust. The estimated return to the trust for the proposed harvest is $452,100.00 based on an estimated harvest of 2,165,000 board feet (15,070 tons) and an overall stumpage value of $30 per ton. Costs, revenues, and estimates of return are estimates intended for relative comparison of alternatives, they are not intended to be used as absolute estimates of return.

References

DNRC 1996. State forest land management plan: final environmental impact statement (and appendixes). Montana Department of Natural Resources and Conservation, Forest Management Bureau, Missoula, Montana.

DNRC. 2010. Montana Department of Natural Resources and Conservation Forested State Trust Lands Habitat Conservation Plan: Final EIS, Volume II, Forest Management Bureau, Missoula, Montana.

Does the proposed action involve potential risks or adverse effects that are uncertain but extremely harmful if they were to occur?
No.

Does the proposed action have impacts that are individually minor, but cumulatively significant or potentially significant?
No.

Environmental Assessment Checklist Prepared By:

Name: Pete Seigmund
Title: Forester
Date: June 2018

Finding

Alternative Selected

Action Alternative

Significance of Potential Impacts

I find that the impacts of the proposed action alternative as described in this Environmental Assessment are not significant. This Environmental Analysis has been completed for the Bear Springs Timber Sale. After a thorough review of the EA, project file, response and discussions with Department and other specialists, Department policies, standards and guidelines, and the State Land Management Rules, I have taken the decision to choose the action alternative. I believe that this EA has described a good approximation what this project would accomplish.

1) Implement silvicultural treatments to improve forest health and vigor.
2) Sell forest products from trust lands within the project area to generate revenue for various trusts to produce the largest measure of reasonable and legitimate return over the long run for specific beneficiary institutions (*Section 77-1-202, Montana Codes Annotated (MCA)).*
3) Improve access to the project area.

Need for Further Environmental Analysis

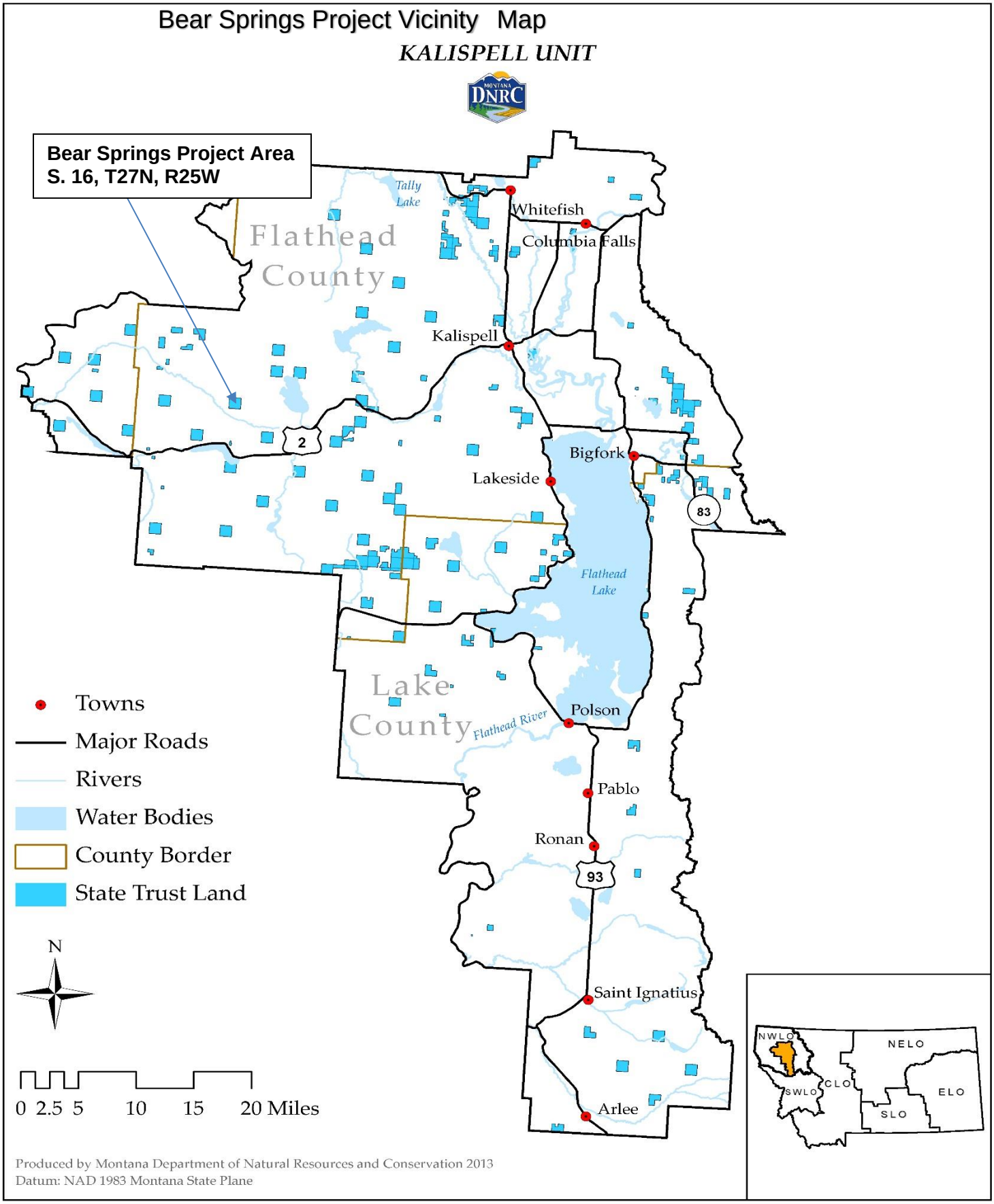
[ ]	EIS	[ ]	More Detailed EA	[X]	No Further Analysis

Environmental Assessment Checklist Approved By:

Name: David M. Poukish
Title: Kalispell Unit Manager, DNRC
Date: 6/19/2018
Signature: /s/David M. Poukish

Attachment A- Maps

A-1: Timber Sale Vicinity Map



A-2: Timber Sale Harvest Units